A. TRANSITIONING N1-2 TO DIAGNOSTIC/STANDBY/OFF FROM PRIMARY & N1-1 TO PRIMARY FROM SECONDARY/STANDBY

1. VERIFY MDM STATES AND MDM IDs

PCS2 Node 1: C&DH: MDM N1-2

PRIMARY NCS MDM Node 1

√ STATE - Primary
√ MDM ID - N1-2

PCS2 Node 1: C&DH: MDM N1-1

SECONDARY NCS MDM Node 1

√ STATE - Secondary/Standby
√ MDM ID - N1-1

NOTE
If states are not correct, do not execute this procedure! √ **MCC**

2. DISABLE NCS AUTO RETRY

PCS2 Node 1: C&DH: MDM N1-1

SECONDARY NCS MDM Node 1

'Software Control'

sel MDM Utilities

Secondary_NCS_MDM_Utilities

√ Secondary_NCS_Auto_Retry_Inh - X (inhibited)

If blank (enabled)
sel Commands
cmd Secondary_NCS_Inh_NCS_Retry **Execute**
√Secondary_NCS_Auto_Retry_Inh - X (inhibited)

3. COMMAND N1-2 MDM TO DIAG (N1-1 SHOULD GO TO PRIM)

PCS2 Node 1: C&DH: MDM N1-2

PRIMARY NCS MDM Node 1

'Software Control'

sel MDM FDIR
√ Prim_NCS_Cmd_Xsitn_to_Dgnstc_Inh - <blank> (enable)

If X (inhibited)

'MDM Major State'

sel Commands
cmd N1-2_MDM_Cmd_Xsitn_Dgnstc_State_Arm **Execute**

'Software Control'

sel MDM FDIR
√ Prim_NCS_Cmd_Xsitn_to_Dgnstc_Inh - <blank> (enable)

NOTE

1. Sending the following command will cause the loss of PCS2, Early COMM, and OIU telemetry until OIU reconfiguration and PCS1 reconnection are done.

2. Possible PDI DECOM Fail message.

'MDM Major State:'

sel Commands
cmd N1-2_MDM_Xsitn_Dgnstc_State **Execute**

PCS2 Node 1: C&DH: MDM N1-2

PRIMARY NCS MDM Node 1

√ Frame Count - <static> (loss of PCS2 telemetry)

Wait 1 minute for N1-1 to go to Primary (N1-1 should go to Primary State after 50 seconds).

4. RECOVER TELEMETRY ON PCS1 AND VERIFY N1-1 IS PRIMARY

PCS1 After boot up (as required), task-bar appears at bottom of display
sel Arrow directly above 'PCS' logo
sel Start/Restart PCS CDS
sel Icon to open PCS CDS Main Control Panel Window

√ Status Box is Green and 'Connected' is displayed in the PCS CDS Main Control Panel Window

NOTE

PCS1 connection to MDM is indicated by 'Green' in the Status Box and/or 'Connected' message displayed in the PCS1 CDS Main Control.

* * * * * * * * * *
* If Status Box is not Green, select 'Connect to MDM' icon to *
* reconnect. *
* If still no joy, close all displays and all iconified items and *
* repeat this step. *
* √ **MCC** if Status Box is still not green. *
* * * * * * * * * *

NOTE

C&W tone and TBD C&W message will be generated as N1-1 becomes primary and detects N1-2 fails

PCS1 Node 1: C&DH: MDM N1-1

PRIMARY NCS MDM Node 1

√ Frame Count - <incrementing>

'MDM Major State:'

√ MDM ID - N1-1
√ MDM State - Primary

5. TELEMETRY RECOVERY ON EARLY COMM (GROUND ONLY)

NOTE

Early COMM should reconnect to N1-1 MDM on the other Orb bus automatically in about 10 seconds after N1-1 MDM becomes Primary.

Node 1: C&DH: MDM N1-1

PRIMARY NCS MDM Node 1

√ Frame Count - <incrementing>

'MDM Major State:'

√ MDM ID - N1-1
√ MDM State - Primary

* * * * * * * * * *
* If Frame Count is Static after 20 seconds from the moment *
* N1-1 becomes Primary (no Early COMM telemetry received), *
* √ **MCC** *****
* * * * * * * * * *

6. TELEMETRY RECOVERY ON OIU

NOTE
Possible PDI DECOM Fail message.

CRT SM 212 OIU
BUS 4 BC - ITEM 15 EXEC
BUS 3 RT - ITEM 10 EXEC
Change OIU N1 Physical Device to N1-1 - ITEM 18 + 4 EXEC

CRT Reload OIU FORMAT 2 - ITEM 1 + 2 EXEC

CRT SM 210 NODE
√ PHY ID PRI MDM - N1-1
√ STATE - PRI
√ FAIL - <blank>
√ FRM CTR - <incrementing>

7. VERIFY N1-2 IS IN DIAGNOSTIC

PCS1 Node 1: C&DH: MDM N1-2

SECONDARY NCS MDM Node 1

√ Frame Count - <static>

PCS1 Node 1: C&DH: MDM N1-1

PRIMARY NCS MDM Node 1

'Software Control'

sel Transmit Mode Code

Primary_NCS_Transmit_Mode_Code

sel Primary NCS Xmt Mode Code Commands
cmd Xmt_Stat_Word_Tmplt
enter Bus ID - 2
enter RT Address - 5 **Execute**
√ Subsystem Flag Set - X (set)

(If Subsystem Flag Bit is set, N1-2 MDM is in Diagnostic State and is ready to accept diagnostic commands)

If transitioning N1-2 to Diagnostic, >>
If transitioning N1-2 to Standby, go to Step 8
If powering off N1-2, go to step 9.

8. IF TRANSITIONING N1-2 MDM TO STANDBY STATE

PCS1 Node 1: C&DH: MDM N1-1

PRIMARY NCS MDM Node1

'Software Control'

sel MDM Utilities
sel Commands

NOTE
1. Startup process will execute from the UAS currently loaded in DRAM.

2. No POST is performed.

cmd N1_2_MDM_Re_Init_MDM_DRAM **Execute**

Wait 60 seconds for MDM to reinitialize

PCS1 Node 1: C&DH: MDM N1-2

SECONDARY NCS MDM Node 1

√ Frame Count - <incrementing>

'MDM Major State:'

√ STATE - Standby
√ MDM ID - N1-2

* * * * * * *
* If state is not Standby, √ **MCC** *
*** * * * * * ***

9. IF POWERING OFF N1-2 MDM

PCS1 Node 1: C&DH: MDM N1-2

SECONDARY NCS MDM Node 1

‘RPCM _N1RS2_C’

sel RPC 13 (Nod1_2_MDM)

RPCM _N1RS2_C_RPC_13 Detail

sel Commands
cmd Open **Execute**
√ Position - Op